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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/042,487	01/09/2002	Andreas Beutler	W-W Case 48	6101

7590 04/15/2004

Flynn, Thiel, Boutell & Tanis, P.C.
2026 Rambling Road
Kalamazoo, MI 49008-1699

EXAMINER

LEO, LEONARD R

ART UNIT PAPER NUMBER

3753

DATE MAILED: 04/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action

Application No.

10/042,487

Applicant(s)

BEUTLER ET AL.

Examiner

Leonard R. Leo

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--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 06 March 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☒ The period for reply expires 4 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
- ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
 - (b) ☐ they raise the issue of new matter (see Note below);
 - (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
 - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____

3. ☐ Applicant's reply has overcome the following rejection(s): _____.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☐ The a) ☐ affidavit, b) ☐ exhibit, or c) ☐ request for reconsideration has been considered but does NOT place the application in condition for allowance because: _____.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____.

Claim(s) objected to: _____.

Claim(s) rejected: 2-6, 9-15 and 24.

Claim(s) withdrawn from consideration: _____.

8. ☒ The drawing correction filed on 06 March 2004 is a) ☒ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____.
10. ☐ Other: _____

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DETAILED ACTION

Upon entry of the amendment filed on March 6, 2004, the following grounds of rejection will apply.

Claim 8 is cancelled, claims 2-6, 9-15 and 24 are pending, and claim 5 remains withdrawn.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 2-4, 6, 10-11, 14 and 24 rejected under 35 U.S.C. 102(b) as being anticipated by Fujikake. Regarding claim 11, the gaps between fins 105 are read as “notches.”

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujikake in view of Beutler et al.

Fujikake discloses all the claimed limitations except plain ends.

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Beutler et al (Figure 2) discloses a heat transfer tube comprising integral fins 2 on an outside of the tube wall and plain ends 1a and plain center lands 1b for the purpose of ease of connection to tubesheets and baffle plates.

Since Fujikake and Beutler et al are both from the same field of endeavor and/or analogous art, the purpose disclosed by Beutler et al would have been recognized in the pertinent art of Fujikake.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Fujikake plain ends and plain center lands for the purpose of ease of connection to tubesheets and baffle plates as recognized by Beutler et al.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujikake in view of McLain.

The device of Fujikake lacks a longitudinal welded seam.

McLain discloses a heat transfer tube comprising integral fins 2 on an outside of the tube wall and a longitudinal welded seam for the purpose of ease of manufacture.

Since Fujikake and McLain are both from the same field of endeavor and/or analogous art, the purpose disclosed by McLain would have been recognized in the pertinent art of Fujikake.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Fujikake a longitudinal welded seam for the purpose of ease of manufacture as recognized by McLain.

Claims 2-4, 9-10, 15 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masukawa et al in view of McLain.

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Masukawa et al discloses all the claimed limitations except integral fins formed on the outside of the tube wall.

McLain discloses a heat transfer tube comprising integral fins 2 on an outside of the tube wall and integral fins 3 on the inside of the tube wall; wherein the integral fins are employed interchangeably (Figures 1B and 1C) for the purpose of achieving a desired heat exchange with the desired working fluids.

Since Masukawa et al and McLain are both from the same field of endeavor and/or analogous art, the purpose disclosed by McLain would have been recognized in the pertinent art of Masukawa et al.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Masukawa et al integral fins on the outside of the tube wall for the purpose of achieving a desired heat exchange with the desired working fluids as recognized by McLain.

Claims 11-12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masukawa et al in view McLain as applied to claims 2-4, 9-10, 15 and 24 above, and further in view of Nishizawa et al.

The combined teachings of Masukawa et al and McLain lacks notched fins.

Nishizawa et al discloses a heat transfer tube comprising integral fins formed by grooves 11 on an outside of the tube wall and notches 12 in the fins for the purpose of improving bubble generation for improved heat exchange.

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Since Masukawa et al and Nishizawa et al are both from the same field of endeavor and/or analogous art, the purpose disclosed by Nishizawa et al would have been recognized in the pertinent art of Masukawa et al.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Masukawa et al notched fins for the purpose of improving bubble generation for improved heat exchange as recognized by Nishizawa et al.

Regarding claim 12, the fins of Nishizawa et al are T-shaped.

Regarding claim 14, the tube of Nishizawa et al is seamless.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Masukawa et al in view McLain as applied to claims 2-4, 9-10, 15 and 24 above, and further in view of Beutler et al, as applied above.

Response to Arguments

The rejection under 35 USC 112, second paragraph is withdrawn.

Applicants' arguments have been fully considered but they are not persuasive.

The claim does not specify the structure of "completely formed fins." Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Fins 105 of Fujikake are read as "integral fins formed on an outside of a tube wall." The region between adjacent rows of "completely formed" fins 105 are read as the "primary groove."

Applicants' remarks with respect to the combination of Masukawa et al and McLain are not commensurate in scope with the claims. A method of manufacturing a heat transfer tube is not being claimed. McLain merely teaches one of ordinary skill in the art that employing a fin

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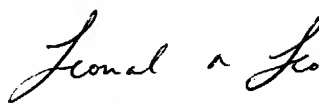
structure on the inner or outer surface of a tube would have been obvious to achieve a desired heat exchange. As disclosed in Figures 1B and 1C of McLain, the two are alternates of one another, where the heat transfer patterns are reversed.

The rejections in view of Nishizawa et al and Beutler et al are deemed correct for lack of any contrary arguments by applicants.

Conclusion

Any inquiry of a general nature, relating to the status of this application or clerical nature (i.e. missing or incomplete references, missing or incomplete Office actions or forms) should be directed to the Technology Center 3700 Customer Service whose telephone number is (703) 306-5648. Status of the application may also be obtained from the Internet: <http://pair.uspto.gov/cgi-bin/final/home.pl>

Any inquiry concerning this Office action should be directed to Leonard R. Leo whose telephone number is (703) 308-2611.



LEONARD R. LEO
PRIMARY EXAMINER
ART UNIT 3753

April 14, 2004